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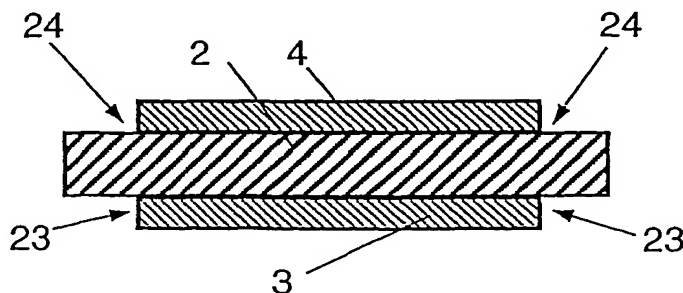
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(54) Title: INSULATED POWER SEMICONDUCTOR MODULE WITH REDUCED PARTIAL DISCHARGE AND MANUFACTURING METHOD



(57) Abstract: A method for assembling a power semiconductor module with reduced partial discharge behavior is described. The method comprises the steps of bonding an insulating substrate (2) onto a bottom plate (11); disposing a first conductive layer (4) on a portion of said insulating substrate (2), so that at least one peripheral top region of said insulating substrate (2) remains uncovered by the first conductive layer (4); bonding a semiconductor chip (6) onto said first conductive layer (4); disposing a precursor (51) of a first insulating material (5) in a first corner (24) formed by said first conductive layer (4) and said peripheral

region of said insulating substrate (2); polymerizing the precursor (51) of the first insulating material (5) to form the first insulating material (5); and covering said semiconductor chip (6), said substrate (2), said first conductive layer (4), and said first insulating material (5) at least partially with a second insulating material. According to the invention, the precursor (51) of the first insulating material is a low viscosity monomer or oligomer, which forms a polyimide when polymerizing. Also disclosed is a semiconductor module with reduced partial discharge behavior.

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